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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/776,892	02/11/2004	Kirill Stoimenov	9432-000257	3341
27572 7590 03/20/2009 HARNESS, DICKEY & PIERCE, P.L.C. P.O. BOX 828 BLOOMFIELD HILLS, MI 48303				
EXAMINER				
NEWAY, SAMUEL G				
ART UNIT		PAPER NUMBER		
2626				
MAIL DATE		DELIVERY MODE		
03/20/2009		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary**Application No.**

10/776,892

Applicant(s)

STOIMENOV ET AL.

Examiner

SAMUEL G. NEWAY

Art Unit

2626

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 August 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SF/ICE)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. This is responsive to the amendment after non-final filed on 20 August 2008.
2. Claims 1 – 29 are still pending and considered below.

Response to Arguments

3. Applicant's arguments with respect to claims 1 – 29 have been considered but are moot in view of the new ground(s) of rejection.

Claim Objections

4. Claim 1 is objected to because of the following informalities: in the preamble, it is believed, "tuning the text-to-speech conversion process" should be 'tuning a text-to-speech conversion process' (emphasis added).
5. Claim 20 is objected to because of the following informalities: it is believed it should depend on claim 19 so "the parameterized aligned sound records formant" can have a proper antecedent basis.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1 – 7, 10, and 12 – 29 are rejected under 35 U.S.C. 102(b) as being anticipated by Miyatake (USPN 5,842,167).

Claim 1:

Miyatake discloses a system for tuning a text-to-speech conversion process (Abstract), the system comprising:

a text-to-speech engine (Fig. 1, item 4 and related text), said text-to-speech engine receiving at least one text-input and converting said text-input into a processed representation (prosodic data, col. 4, lines 8-11), said processed representation including at least one segment (synthesis unit, col. 4, lines 8-11) and a word-boundary (Fig. 4, dashed lines between synthesis units), each associated with at least one speech feature, wherein said at least one speech feature of said word-boundary includes boundary strength and pause duration (Fig. 4, PAUSE, and related text. Note that the boundary strength is represented by the distance between the dashed lines between synthesis units); and

a visual editing interface (Fig. 1, item 5 and related text) displaying said processed representation using at least one graphical indicator including displayed segments and displayed boundaries on an output device (Fig. 4 and related text), wherein said visual editing interface displays and allows editing of said at least one speech feature of said word-boundary by editing (a) a displayed boundary and (b) spacing between a displayed segment and said displayed boundary ("the displayed characters are edited as shown in FIG. 4, the speech synthesizing means 6 inserts pauses at the beginning and the end

of "hai", which have wider character spacings", col. 4, lines 45-50. See also Figs. 3, 4, and related text).

Claim 2:

Miyatake discloses the system of claim 1 wherein said visual editing interface provides at least one editing function to a user, the editing function enabling modification of said speech feature associated with said segment through a change in the corresponding said graphical indicator (col. 2, lines 35-51).

Claim 3:

Miyatake discloses the system of claim 2 wherein said visual editing interface associates said speech feature corresponding to said segment with said graphical indicator, wherein the user's modification of said graphical indicator results in a corresponding change in said speech feature of said segment (col. 2, lines 35-51).

Claim 4:

Miyatake discloses the system of claim 1 wherein said speech feature is at least one of the following: normalized text, part-of-speech, parsing of text, chunking of text, boundary strength, pause duration, transcription, speech rate, syllable duration, segment duration, pitch, word prominence, emphasis, formant mixing mode, unit selection override, intensity contour, formant trajectories, and allophone rules (Fig. 4, PAUSE, and related text).

Claim 5:

Miyatake discloses the system of claim 1 wherein said graphical indicator comprises at least one of the following: graphical style, font faces, coloring, vertical

spacing, horizontal spacing, italicization, boldness, underlining, blinking, crossing-out, text orientation, text rotation, punctuation symbols and graphical symbols (col. 3, lines 24-34).

Claim 6:

Miyatake discloses the system of claim 1 wherein said processed representation employs a parameterized aligned sound records format (col. 3, lines 35-45).

Claim 7:

Miyatake discloses the system of claim 1 wherein said segment comprises at least one of the following: word, letter, syllable, pause, word boundary and punctuation-mark (Fig. 4, *hai*, and related text).

Claim 10:

Miyatake discloses the system of claim 1 wherein said visual editing interface allows definition of said input-text by providing a set of text messages containing non-editable text and editable blank slots into which at least part of said input-text can be entered (col.5, lines 22-24. Note that text on the word processor's inherent icons is non-editable).

Claim 12:

Miyatake discloses the system of claim 1 wherein said visual editing interface provides the user with speech audio output of said processed representation (Fig. 1, item 8 and related text).

Claim 13:

Miyatake discloses the system of claim 1 wherein visual editing interface is connected to a data-store for storing and retrieving said representation (Fig. 1, item 4 and related text. Note that data must be stored in order to be retrieved).

Claims 14 – 16:

Miyatake discloses the system of claim 1 wherein the said processed representation is a modified textual representation, wherein the input text is used to generate said processed representation (Fig. 4 and related text), and wherein said modified textual representation is stored and accessed from a data store (Fig. 1, item 4 and related text. Note that data must be stored in order to be retrieved).

Claim 17:

Miyatake discloses the system of claim 14 wherein said textual representation is used to generate synthesized speech using a TTS system (Fig. 1, item 6 and related text) distinct from said text-to-speech engine (Fig. 1, item 4 and related text).

Claim 18:

Miyatake discloses a system for providing a text-to-speech interface (Abstract), the system comprising:

a visual interface connected to a text-to-speech engine (Fig. 1, item 5 and related text); and

at least one communication channel connecting said visual interface to said text-to-speech engine (Fig.1, communication link between items 5 and 6), said text-to-speech engine communicating with said visual interface over said communication

channel by sending and receiving at least one data segment in a format (Fig. 1, item 6 and related text),

wherein said visual interface communicates variations in one or more types of speech features associated with segments of said data by varying visual display properties of the segments (col. 3, lines 23-34), at least one of said speech features includes boundary strength and pause duration, and said visual display properties are applied to at least one of (a) a displayed boundary between adjacent segments and (b) spacing between a segment and said displayed boundary ("the displayed characters are edited as shown in FIG. 4, the speech synthesizing means 6 inserts pauses at the beginning and the end of "hai", which have wider character spacings", col. 4, lines 45-50. See also Figs. 3, 4, and related text).

Claim 19:

Miyatake discloses the system of claim 18 wherein said format of said data segment is a parameterized aligned sound records format (col. 3, lines 35-45).

Claim 20:

Miyatake discloses the system of claim 19 wherein said text-to-speech engine sends said data segment in the parameterized aligned sound records format to said visual interface, said visual interface rendering said data segment in a visual form, said visual interface allowing editing of said data segment to produce an edited data segment, said visual interface sending said edited data segment to said text-to-speech engine (col. 3, lines 35-45).

Claim 21:

Miyatake discloses the system of claim 18 wherein said visual interface sends data to said text-to-speech engine over a first said communication channel and said text-to-speech engine sends data to said visual interface over a second said communication channel (Fig. 1, items 5, 6, and related text).

Claim 22:

Miyatake discloses a method for visual tuning text-to-speech conversion process, the method comprising:

converting an input-text to a processed representation using a text-to-speech engine, said processed representation including at least one speech feature of said input-text (col. 3, lines 19-23);

displaying said processed representation on a visual editing interface connected to said text-to-speech engine, said speech feature of said processed representation being displayed in a corresponding graphical form (col. 3, lines 35-45);

communicating variations in one or more types of speech features associated with segments of said representation by varying visual display properties of the segments (col. 3, lines 24-35), wherein said speech features include boundary strength and pause duration, and said visual display properties are applied to at least one of (a) a displayed boundary between adjacent segments and (b) spacing between a segment and said displayed boundary ("the displayed characters are edited as shown in FIG. 4, the speech synthesizing means 6 inserts pauses

at the beginning and the end of "hai", which have wider character spacings", col. 4, lines 45-50. See also Figs. 3, 4, and related text); and

providing an editing function in said visual editing interface to a user for modifying said speech feature in said graphical form (col. 2, lines 35-51).

Claim 23:

Miyatake discloses the method of claim 22 further comprising: generating speech audio equivalent of said processed representation through said visual editing interface (col. 3, lines 35-53).

Claim 24:

Miyatake discloses the method of claim 22 further comprising: saving said processed representation in a data store; and loading said processed representation stored in said data store into said visual editing interface (Fig. 1, item 4 and related text. Note that data must be stored in order to be retrieved).

Claim 25:

Miyatake discloses the method of claim 22 further comprising: converting said processed representation into a modified textual representation of the processed input-text (col. 3, lines 35-53).

Claim 26:

Miyatake discloses the method of claim 25 further comprising: converting said textual representation into a processed representation, wherein the input text is used to generate said processed representation (Fig. 4 and related text).

Claim 27:

Miyatake discloses the method of claim 25 further comprising: storing said modified textual representation in a data store; and loading said modified textual representation stored in said data store into said visual editing interface (Fig. 1, item 4 and related text. Note that data must be stored in order to be retrieved. See also Fig. 4 and related text).

Claim 28:

Miyatake discloses the method of claim 25 further comprising: using said modified textual representation to synthesize speech using a TTS system (Fig. 1, item 6 and related text) distinct from said text-to-speech engine (Fig. 1, item 4 and related text).

Claim 29:

Miyatake discloses the system of claim 1, wherein said visual editing interface displays a modified textual representation of said text-input, and variations in visual display for communicating different speech features individually associated with different textual segments of the textual representation include a combination of at least two of: (a) variations in graphical length of the textual segments; (b) variations in vertical positions of the textual segments; (c) variations in horizontal spacing of the textual segments; (d) variations in font faces of the textual segments; (e) variations in coloring of the textual segments; (f) variations in styles of the textual segments; (g) variations in orientation of the textual segments; (h) variations in rotation of the textual segments; or (i) punctuation of the textual segments (col. 4, lines 55-67).

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 8, 9, and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyatake (USPN 5,842,167) in view of Kobal et al (USPN 7,099,828).

Claims 8 and 9:

Miyatake discloses the system of claim 1 but does not explicitly disclose wherein said visual editing interface operates as a plug-in for a graphical user interface wherein said plug-in is an ActiveX control.

In a similar TTS system where a user can specify the pronunciation for a given text, Kobal discloses a visual editing interface as a standalone tool (col. 3, lines 46-49). In addition, ActiveX controls are reusable software components developed in the 1990's by Microsoft to enable enhanced formatting of web pages.

It would have been obvious to one with ordinary skill in the art at the time of the invention to have operated Miyatake's editing interface as an ActiveX plug-in because ActiveX technology adds interactivity and more functionality, such as animation or pop-up menu, and can be written in a number of software languages.

Claim 11:

Miyatake discloses the system of claim 1 but does not explicitly disclose wherein said visual editing interface is language independent.

In a similar TTS system where a user can specify the pronunciation for a given text, Kobal discloses a visual editing interface that is language independent (col. 5, lines 60-67).

It would have been obvious to one with ordinary skill in the art at the time of the invention to have made Miyatake's visual editing interface language independent in order to use Miyatake's system in different parts of the world where different languages are used (Kobal, col. 3, lines 30-32).

Conclusion

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SAMUEL G. NEWAY whose telephone number is (571)270-1058. The examiner can normally be reached on Monday - Friday 8:30AM - 5:30PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David R Hudspeth can be reached on 571-272-7843. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/David R Hudspeth/
Supervisory Patent Examiner, Art Unit 2626

/S. G. N./
Examiner, Art Unit 2626